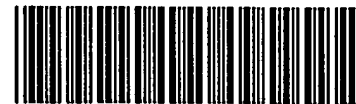


## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/563,944  
Source: 1Fwp  
Date Processed by STIC: 1/19/06

# ***ENTERED***



1FWP

## RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,944

TIME: 13:18:13

Input Set : A:\sequence listing ascii.txt

Output Set: N:\CRF4\01192006\J563944.raw

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3 <110> APPLICANT: Cytos Biotechnology AG
4     Bachmann, Martin F
5     Schwarz, Katrin
7 <120> TITLE OF INVENTION: PACKAGED VIRUS-LIKE PARTICLES
9 <130> FILE REFERENCE: C62863PC
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/563,944
C--> 11 <141> CURRENT FILING DATE: 2006-01-10
11 <150> PRIOR APPLICATION NUMBER: US 60/485,717
12 <151> PRIOR FILING DATE: 2003-07-10
14 <160> NUMBER OF SEQ ID NOS: 60
16 <170> SOFTWARE: PatentIn version 3.2
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 132
20 <212> TYPE: PRT
21 <213> ORGANISM: Bacteriophage Q-beta
23 <400> SEQUENCE: 1
25 Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Lys
26 1          5          10          15
29 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
30          20          25          30
33 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
34          35          40          45
37 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
38          50          55          60
41 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
42 65          70          75          80
45 Asp Pro Ser Val Thr Arg Gln Ala Tyr Ala Asp Val Thr Phe Ser Phe
46          85          90          95
49 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
50          100         105         110
53 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
54          115         120         125
57 Asn Pro Ala Tyr
58          130
61 <210> SEQ ID NO: 2
62 <211> LENGTH: 329
63 <212> TYPE: PRT
64 <213> ORGANISM: Bacteriophage Q-beta
66 <400> SEQUENCE: 2
68 Met Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly
69 1          5          10          15
72 Lys Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly
73          20          25          30

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Input Set : A:\sequence listing ascii.txt

Output Set: N:\CRF4\01192006\J563944.raw

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76 Val Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg
77      35      40      45
80 Val Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys
81      50      55      60
84 Val Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser
85 65      70      75      80
88 Cys Asp Pro Ser Val Thr Arg Gln Ala Tyr Ala Asp Val Thr Phe Ser
89      85      90      95
92 Phe Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu
93      100     105     110
96 Leu Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln
97      115     120     125
100 Leu Asn Pro Ala Tyr Trp Thr Leu Leu Ile Ala Gly Gly Gly Ser Gly
101     130     135     140
104 Ser Lys Pro Asp Pro Val Ile Pro Asp Pro Pro Ile Asp Pro Pro Pro
105 145     150     155     160
108 Gly Thr Gly Lys Tyr Thr Cys Pro Phe Ala Ile Trp Ser Leu Glu Glu
109      165     170     175
112 Val Tyr Glu Pro Pro Thr Lys Asn Arg Pro Trp Pro Ile Tyr Asn Ala
113      180     185     190
116 Val Glu Leu Gln Pro Arg Glu Phe Asp Val Ala Leu Lys Asp Leu Leu
117     195     200     205
120 Gly Asn Thr Lys Trp Arg Asp Trp Asp Ser Arg Leu Ser Tyr Thr Thr
121     210     215     220
124 Phe Arg Gly Cys Arg Gly Asn Gly Tyr Ile Asp Leu Asp Ala Thr Tyr
125 225     230     235     240
128 Leu Ala Thr Asp Gln Ala Met Arg Asp Gln Lys Tyr Asp Ile Arg Glu
129      245     250     255
132 Gly Lys Lys Pro Gly Ala Phe Gly Asn Ile Glu Arg Phe Ile Tyr Leu
133      260     265     270
136 Lys Ser Ile Asn Ala Tyr Cys Ser Leu Ser Asp Ile Ala Ala Tyr His
137     275     280     285
140 Ala Asp Gly Val Ile Val Gly Phe Trp Arg Asp Pro Ser Ser Gly Gly
141     290     295     300
144 Ala Ile Pro Phe Asp Phe Thr Lys Phe Asp Lys Thr Lys Cys Pro Ile
145 305     310     315     320
148 Gln Ala Val Ile Val Val Pro Arg Ala
149      325
152 <210> SEQ ID NO: 3
153 <211> LENGTH: 128
154 <212> TYPE: PRT
155 <213> ORGANISM: Bacteriophage PP7
157 <400> SEQUENCE: 3
159 Met Ser Lys Thr Ile Val Leu Ser Val Gly Glu Ala Thr Arg Thr Leu
160 1      5      10      15
163 Thr Glu Ile Gln Ser Thr Ala Asp Arg Gln Ile Phe Glu Glu Lys Val
164      20      25      30
167 Gly Pro Leu Val Gly Arg Leu Arg Leu Thr Ala Ser Leu Arg Gln Asn
168     35      40      45

```

## RAW SEQUENCE LISTING

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Input Set : A:\sequence listing ascii.txt

Output Set: N:\CRF4\01192006\J563944.raw

```

171 Gly Ala Lys Thr Ala Tyr Arg Val Asn Leu Lys Leu Asp Gln Ala Asp
172      50                      55                      60
175 Val Val Asp Cys Ser Thr Ser Val Cys Gly Glu Leu Pro Lys Val Arg
176 65                      70                      75                      80
179 Tyr Thr Gln Val Trp Ser His Asp Val Thr Ile Val Ala Asn Ser Thr
180                      85                      90                      95
183 Glu Ala Ser Arg Lys Ser Leu Tyr Asp Leu Thr Lys Ser Leu Val Ala
184                      100                     105                     110
187 Thr Ser Gln Val Glu Asp Leu Val Val Asn Leu Val Pro Leu Gly Arg
188      115                      120                      125
191 <210> SEQ ID NO: 4
192 <211> LENGTH: 132
193 <212> TYPE: PRT
194 <213> ORGANISM: Artificial Sequence
196 <220> FEATURE:
197 <223> OTHER INFORMATION: Bacteriophage Qbeta 240 mutant
199 <400> SEQUENCE: 4
201 Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Arg Asp Gly Lys
202 1                      5                      10                      15
205 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
206      20                      25                      30
209 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
210      35                      40                      45
213 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
214      50                      55                      60
217 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
218 65                      70                      75                      80
221 Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
222      85                      90                      95
225 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
226      100                     105                     110
229 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
230      115                      120                      125
233 Asn Pro Ala Tyr
234      130
237 <210> SEQ ID NO: 5
238 <211> LENGTH: 132
239 <212> TYPE: PRT
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Bacteriophage Q-beta 243 mutant
245 <400> SEQUENCE: 5
247 Ala Lys Leu Glu Thr Val Thr Leu Gly Lys Ile Gly Lys Asp Gly Lys
248 1                      5                      10                      15
251 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
252      20                      25                      30
255 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
256      35                      40                      45
259 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val

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## RAW SEQUENCE LISTING

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Input Set : A:\sequence listing ascii.txt

Output Set: N:\CRF4\01192006\J563944.raw

```

260      50      55      60
263 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
264 65      70      75      80
267 Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
268      85      90      95
271 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
272      100      105      110
275 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
276      115      120      125
279 Asn Pro Ala Tyr
280      130
283 <210> SEQ ID NO: 6
284 <211> LENGTH: 132
285 <212> TYPE: PRT
286 <213> ORGANISM: Artificial Sequence
288 <220> FEATURE:
289 <223> OTHER INFORMATION: Bacteriophage Q-beta 250 mutant
291 <400> SEQUENCE: 6
293 Ala Arg Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Arg Asp Gly Lys
294 1      5      10      15
297 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
298      20      25      30
301 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
302      35      40      45
305 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
306      50      55      60
309 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
310 65      70      75      80
313 Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
314      85      90      95
317 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
318      100      105      110
321 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
322      115      120      125
325 Asn Pro Ala Tyr
326      130
329 <210> SEQ ID NO: 7
330 <211> LENGTH: 132
331 <212> TYPE: PRT
332 <213> ORGANISM: Artificial Sequence
334 <220> FEATURE:
335 <223> OTHER INFORMATION: Bacteriophage Q-beta 251 mutant
337 <400> SEQUENCE: 7
339 Ala Lys Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Arg
340 1      5      10      15
343 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
344      20      25      30
347 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
348      35      40      45

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## RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,944

TIME: 13:18:13

Input Set : A:\sequence listing ascii.txt

Output Set: N:\CRF4\01192006\J563944.raw

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351 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
352      50                      55                      60
355 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
356 65                      70                      75                      80
359 Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
360      85                      90                      95
363 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
364      100                      105                      110
367 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
368      115                      120                      125
371 Asn Pro Ala Tyr
372      130
375 <210> SEQ ID NO: 8
376 <211> LENGTH: 132
377 <212> TYPE: PRT
378 <213> ORGANISM: Artificial Sequence
380 <220> FEATURE:
381 <223> OTHER INFORMATION: Bacteriophage Q-beta 259 mutant
383 <400> SEQUENCE: 8
385 Ala Arg Leu Glu Thr Val Thr Leu Gly Asn Ile Gly Lys Asp Gly Arg
386 1      5                      10                      15
389 Gln Thr Leu Val Leu Asn Pro Arg Gly Val Asn Pro Thr Asn Gly Val
390      20                      25                      30
393 Ala Ser Leu Ser Gln Ala Gly Ala Val Pro Ala Leu Glu Lys Arg Val
394      35                      40                      45
397 Thr Val Ser Val Ser Gln Pro Ser Arg Asn Arg Lys Asn Tyr Lys Val
398      50                      55                      60
401 Gln Val Lys Ile Gln Asn Pro Thr Ala Cys Thr Ala Asn Gly Ser Cys
402 65                      70                      75                      80
405 Asp Pro Ser Val Thr Arg Gln Lys Tyr Ala Asp Val Thr Phe Ser Phe
406      85                      90                      95
409 Thr Gln Tyr Ser Thr Asp Glu Glu Arg Ala Phe Val Arg Thr Glu Leu
410      100                      105                      110
413 Ala Ala Leu Leu Ala Ser Pro Leu Leu Ile Asp Ala Ile Asp Gln Leu
414      115                      120                      125
417 Asn Pro Ala Tyr
418      130
421 <210> SEQ ID NO: 9
422 <211> LENGTH: 185
423 <212> TYPE: PRT
424 <213> ORGANISM: Hepatitis B virus
426 <400> SEQUENCE: 9
428 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
429 1      5                      10                      15
432 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
433      20                      25                      30
436 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
437      35                      40                      45
440 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/563,944

DATE: 01/19/2006

TIME: 13:18:14

Input Set : A:\sequence listing ascii.txt

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L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date